

## REMARKS

Reconsideration of this application in light of the present amendment and remarks is respectfully requested.

Claims 1-16 and 19 have been rejected.

Claims 17-18 were previously canceled.

Claims 1 and 19 have been amended.

Claim 20 has been added.

Claims 1-16 and 19-20 are pending in this application.

Claims 1-4, 16 and 19 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Sahin et al. (US 6,393,277) in view of Duque-Anton et al. (US 5,475,868). This rejection is respectfully traversed.

Independent claim 1 has been amended to reflect that simultaneous occupancy is determined as a function of probability of a particular *time slot* being occupied at the same time in first and second cells, and not just a *channel* occupancy. Support for this can be found in the specification on page 15 lines 1-3 and page 5 line 26 to page 6 line 2.

Advantageously, applicant's invention of amended claim 1 allows for the interference relationship to reflect not only a level of potential interference but also the probability that such a simultaneous occupancy will cause interference to a communicating unit. As such, applicant's invention provides a significantly more accurate reflection of the impact of the interference caused and thus a much improved interference relationship is provided. The improved interference relationship allows for much more accurate performance prediction of a cellular communication system. It allows for improved frequency planning and may accordingly significantly increase the capacity of the communication system.

Sahin et al. (abstract) disclose the measurement of interference within a serving cell and the determination of a traffic level of an adjacent cell. A correlation is then performed using this information to determine which adjacent cell contributes to interference. As the Examiner has stated, this reference is missing the element of determining an interference relationship between cells in response to a simultaneous occupancy criterion.

Duque-Anton et al. disclose that the occupancy of a radio channel is used to determine quality of that channel and subsequently its contribution to cumulative interference (col. 4 lines 6-32). Claim 1 has been amended to distinguish from Duque-Anton et al. by reciting occupancy of *time slots* instead of just a radio *channel*. Therefore, applicant respectfully submits that amended claim 1 is allowable over the cited art.

Claims 2-4 and 16 are dependent on amended claim 1, and therefore include all of the recitations of claim 1, which are not disclosed or suggested by the references.

Claim 19 has been amended to include the same recitations as amended claim 1, in apparatus form, and is therefore deemed allowable as well for the same reasons.

Accordingly, it is respectfully submitted that this rejection has been overcome.

Claims 5-15 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Sahin et al. in view of Duque-Anton et al. and further in view of Hopkinson (GB 2 356 320 A). This rejection is respectfully traversed.

Sahin et al. have been distinguished over previously. Applicant's distinguishing remarks providing the benefits of applicant's invention and disadvantages of Sahin et al, to the extent applicable, are hereby incorporated by reference.

Duque-Anton et al. has been distinguished previously, and the above arguments concerning Duque-Anton et al. are hereby incorporated by reference.

Regarding claim 8, the Examiner has stated that neither Sahin et al nor Duque-Anton et al disclose a potential interference relationship determined in response to a measurement of a signal level in the second cell associated with a transmission in a first cell. The Examiner goes on to state that Hopkinson discloses signal disruption (interference) as a result of a low signal level versus system noise which can be calculated from measurements reports. Hopkinson is solely concerned about measurement reports within the *serving* cell and not *neighboring* cells, as is recited in claim 8. The equation (3) used in Hopkinson specifically refers to only measurement reports and quality determinations made within the serving cell (page 6 line 32 to page 7 line 2), which is obvious to one skilled in the art. But this is quite different from applicant's claim 8 where measurement reports of a serving cell from a *different* cell are used back in the *serving* cell. Specifically, a signal level measurement of a broadcast signal in the first cell may provide a reliable indication of the potential interference that may be caused to communications in the second cell. Indeed, there is nothing envisioned in Hopkinson for obtaining or providing such inter-cell information. Moreover, such information is not readily provided between cells in existing systems, and is typically available only within a serving cell, as is obviously used in Hopkinson. Therefore, applicant respectfully submits that the inter-cell reporting of measurement reports of claim 8 are not obvious to one of ordinary skill in the art.

Accordingly, applicant submits that claim 8 is allowable over the cited art.

Moreover, claims 5-15 are dependent on amended claim 1, hereby incorporated by reference, and are therefore allowable as well for the same reasons.

Therefore, it is respectfully submitted that this rejection has been overcome.

New claim 20 has been added including all of the recitations of amended claims 1 and 8. Inasmuch as new claim 20 includes all of the recitations of amended claim 1, claim 20 is deemed allowable as well for the same reasons.

The other references of record have been reviewed and applicant's invention is deemed patentably distinct and nonobvious over each taken alone or in combination.

For the foregoing reasons, applicants respectfully request that the above rejections be withdrawn.

Inasmuch as this amendment distinguishes all of the applicants' claims over the prior art references, for the many reasons indicated above, passing of this case is now believed to be in order. A Notice of Allowance is earnestly solicited.

No amendment made was related to the statutory requirements of patentability unless expressly stated herein. No amendment made was for the purpose of narrowing the scope of any claim, unless applicant has argued herein that such amendment was made to distinguish over a particular reference or combination of references.

In the event that the Examiner deems the present application non-allowable, it is requested that the Examiner telephone the Applicants' attorney at the number indicated below so that the prosecution of the present case may be advanced by the clarification of any continuing rejection or through an Examiner's amendment.

Authorization is hereby given to charge any fees necessitated by actions taken herein to Deposit Account 50-2117.

Respectfully submitted,  
**Ratford et al.**

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